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Environmental Defense v. Duke Energy Corporation: Judicial Overstepping Alters the Impacts of New Source Performance Standards and Prevention of Significant Deterioration Regulations

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ENVIRONMENTAL DEFENSE V. DUKE ENERGY CORPORATION: JUDICIAL OVERSTEPPING ALTERS THE IMPACTS OF NEW SOURCE PERFORMANCE STANDARDS AND PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS

I. INTRODUCTION

On October 9, 2007, in potentially the largest environmental settlement in United States history, American Electric Power (AEP) agreed to reduce sulfur dioxide and nitrogen oxide emissions from their power plants by two-thirds by spending at least $4.6 billion on power plant environmental technology improvements and ecological remediation over the next decade.[1] *The Supreme Court decision in Environmental Defense v. Duke Energy may have persuaded AEP to settle the lawsuit.*[2]

The United States contains twenty-five percent of the world's coal reserves, and American coal-firing power plants comprise thirty-five percent of total carbon dioxide emissions in the United States.[3] Moreover, pollution emitted from power plants in the United States contributes to approximately 23,600 deaths each year.[4] Additionally, as a result of air pollution, 21,850 people are admitted to hospitals, 26,000 people visit emergency rooms with asthmatic conditions, 38,200 people have heart attacks, 16,200 people develop chronic bronchitis, 554,000 people have asthma attacks, and people miss 3,186,000 days of work due to various air pollution-related illnesses.[5]

1. *See* Steven Mufson, *Utility to Pay Large Sum in Clean Air Settlement*, WASH. POST, Oct. 9, 2007, at D01, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/10/08/AR2007100801689.html (explaining American Electric Power settlement with EPA concerning damage created by past pollution emissions, environmental remediation, and future emissions abatement).

2. *See id.* (discussing new coal plant company settlement using *Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423 (2007) as precedent).

3. United States Bureau of Land Management, Energy Food for Thought: Some Basic Energy Information, http://www.blm.gov/education/00_resources/articles/energy/energy1.html (last visited Feb. 21, 2008) (emphasizing potentially destructive attributes of coal-firing power plants and highlighting need for clean energy alternatives).

4. ABT ASSOCIATES, POWER PLANT EMISSIONS: PARTICULATE MATTER-RELATED HEALTH DAMAGES AND THE BENEFITS OF ALTERNATIVE EMISSION REDUCTION SCENARIOS (6-1)-(6-3) (June 2004) http://www.catf.us/publications/reports/Power_Plant_Emissions.pdf (last visited Feb. 21, 2008) (calculating approximate number of deaths caused by air pollution each year).

5. *Id.* (quantifying avoidable health effects from decreased power plant emissions).

Although renewable energy sources like hydroelectric power and wind energy have recently created a lasting presence on the power grid, fossil fuels, such as oil, gas, and coal, are still projected to comprise approximately eighty-six percent of the United States energy supply in 2030.[6] The above-mentioned human illness statistics, coupled with coal's continued prominence as an inexpensive and abundant source of energy, highlight the need for government regulation as a means to control emissions and encourage the use of new pollution-reduction technologies in existing and future coal plants.[7]

Although new technologies and governmental regulations provide the potential for reducing emissions from coal-firing plants, many plants remain overlooked and unregulated.[8] The Prevention of Significant Deterioration (PSD) regulations, enacted in 1977, allowed energy companies to continue using existing equipment, rather than immediately retrofitting their coal power plants with environmentally-friendly technology, to meet the new Clean Air Act (CAA) air quality standards.[9] Today, many large utility companies continue to avoid regulation under the CAA by choosing not to "modify" their facilities.[10]

During the 1970s, Congress enacted New Source Performance Standards (NSPS) in addition to the PSD regulations in order to better monitor and enforce the CAA's pollution-controlling strate-

6. *See* Energy Information Administration, Overview: Annual Energy Outlook 2007 2 (2007) http://www.eia.doe.gov/oiaf/archive/aeo07/pdf/overview.pdf (highlighting continued need for electricity from fossil fuels despite emergence of alternative energy sources).

7. *See generally* MASSACHUSETTS INSTITUTE OF TECHNOLOGY, THE FUTURE OF COAL: AN MIT DISCIPLINARY STUDY (2007), vii, http://web.mit.edu/coal/The_Future_of_Coal.pdf (highlighting continuing prominence of coal emissions and proposing methods to limit emissions in current plants).

8. *See* Energy Information Administration, *supra* note 6, at 2 (noting need for governmental controls on emissions).

9. United States v. Duke Energy Corp., 278 F. Supp. 2d 619, 628 (M.D.N.C. 2003) (eliminating incentive to upgrade power plants to conform to current environmental technology standards).

10. *See* Thomas Gremillion, *Case Comment: Environmental Defense v. Duke Energy Corporation*, 31 HARV. ENVTL. L. REV. 333, 333 (2007) (discussing provisions of Clean Air Act that grant non-compliance waivers to existing plants until plant is modified). The Environmental Protection Agency (EPA) gives various definitions of the word "modification." *United States v. Duke Energy Corp.*, 278 F. Supp. 2d at 626. New Source Performance Standards (NSPS) define "modification" as any increase in the hourly emissions from a source of pollution. *See* 40 C.F.R. § 60.14(a)–(b) (2000). PSD standards define "modification" as an increase in annual pollution from a major source of pollution. *See* 40 C.F.R. § 51.166(b)(2)(i) (1978).

gies.[11] The NSPS require all new major coal-firing plants to integrate the most effective emissions-reducing technologies before beginning operations.[12] In addition, the NSPS mandate that all existing coal-firing plants upgrade their emissions reduction equipment when engaging in plant "modification."[13] The NSPS define "modification" as:

> any physical change in, or change in the method of operation of, a stationary source that would result in: a significant emissions increase (as defined in paragraph (b)(39) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(49) of this section); and a significant net emissions increase of that pollutant from the major stationary source.[14]

Further, PSD regulations implemented the New Source Review (NSR) program, which requires energy companies operating new or modified power plants to acquire a permit from the government before upgrading their plants in a manner that would increase air pollutant emissions.[15] In 2000, the Clinton administration and various environmental protection groups brought suit against companies that owned operational coal-firing power plants across the nation for failure to apply for NSR permits.[16] Energy companies, including Duke Energy, responded that their plant upgrades did not fall within the definition of "modification" under PSD regulations.[17] In *Environmental Defense v. Duke Energy Corp.* (*Environmental Defense*),[18] the Supreme Court addressed the issue of whether the Environmental Protection Agency (EPA) was obligated to adhere to the PSD definition of "modification," which cross-references the NSPS.[19] Through its holding, the Court created a dangerous precedent by giving the EPA discretion to interpret the word "modifica-

11. *See* Envtl. Def. v. Duke Energy, 127 S. Ct. 1423, 1428 (2007) (explaining impetus behind creation of new environmental regulations).

12. Liz Darling Edmondson, *The Increased Emissions Test Under New Source Review: Regulatory Uncertainty Calls for an Amendment to the Clean Air Act*, 45 BRANDEIS L.J. 175, 177 (2006) (detailing origins of NSPS).

13. *Id.* (defining "modification" of power plants under NSPS rules).

14. 40 C.F.R. § 51.166(b)(2)(i) (2007) (defining modification in NSPS context).

15. *Id.* (explaining origins of PSD and New Source Review Permit Program).

16. *See* Gremillion, *supra* note 10, at 333 (describing origins of suit and constituent parties).

17. *Id.* at 336 (positing that Duke Energy argued plant upgrades did not fall under hourly provision in definition of "modification").

18. 127 S. Ct. 1423 (2007).

19. *Id.* at 1428 (discussing main issue in case and delivering holding).

tion" differently under the NSPS and PSD programs, even though the CAA's PSD regulations explicitly incorporate the definition of "modification" from the Act's NSPS provision.[20]

Environmental Defense changed the landscape for litigating cases concerning "modifications" of power plants falling under the scope of PSD regulations.[21] Seven months after the decision in *Environmental Defense*, American Electric Power Company (AEP) negotiated a settlement with various citizen groups and states.[22] This settlement required AEP to spend as much as $4.6 billion towards emissions reduction measures at their power plants, $15 million in civil penalties, and $60 million to mitigate existing damage to the environment.[23]

This Note examines the Supreme Court's decision in *Environmental Defense*. Section II discusses the facts and procedural history of *Environmental Defense*.[24] Section III outlines the legal framework behind the case and includes discussions of significant cases, pertinent statutes, and relevant legislative history.[25] Section IV explains the Court's reasoning for granting discretion to the EPA, including accepted and rejected arguments.[26] Section V scrutinizes the Supreme Court's decision and reasoning and suggests a different interpretation of the case's relevant facts and statutes.[27] Section VI projects the legal and non-legal impact of the Court's decision, predicting its effect on future CAA case law and energy industry practices.[28]

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20. *See Supreme Court Overturns Fourth Circuit Court's Duke Energy Decision*, 17 No. 4 AIRPOLC 3.4 (2007) (criticizing Supreme Court's decision in *Duke Energy*).

21. *See id.* (discussing implications of *Environmental* Defense decision).

22. *See* Mufson, *supra* note 1, at D01 (using precedents set in *Environmental Defense* to lay groundwork for settlement agreement).

23. *Id.* (explaining AEP settlement terms).

24. For a further discussion of the facts and procedural history of *Environmental Defense*, *see infra* notes 29-43 and accompanying text.

25. For a further discussion of the CAA, *see infra* notes 44-62 and accompanying text. For a further discussion of the Reich Letter, *see infra* notes 63-66 and accompanying text. For a further discussion of case law that supports Duke Energy's position, *see infra* notes 67-86 and accompanying text. For a further discussion of case law that supports Environmental Defense's position, *see infra* notes 87-103 and accompanying text.

26. For a narrative analysis of the *Environmental* Defense decision, *see infra* notes 104-26 and accompanying text.

27. For a critical analysis of the *Environmental Defense* decision, *see infra* notes 127-45 and accompanying text.

28. For an impact analysis of the *Environmental Defense* decision, *see infra* notes 146-72 and accompanying text.

II. FACTS

In *Environmental Defense*, the Supreme Court was charged with determining whether the EPA, when interpreting "modification" language in the PSD regulations, may determine that a PSD permit is required if the polluting source increases the amount of pollution emitted per year.[29] Duke Energy replaced plant components on twenty-nine aged coal power plants from 1988 to 2000, allowing the power plants to operate for more hours per day and keeping the existing plants in continuous working condition.[30]

In 2000, the United States, joined by various environmental interest groups, sued Duke Energy, claiming Duke Energy violated PSD regulations when it refused to apply for NSR permits for its plant upgrades.[31] Respondent Duke Energy contended that a PSD permit is only required when a coal power plant "modification" increases the hourly rate of pollution for that plant, as specified by the NSPS regulations.[32] Duke Energy did not acquire NSR permits prior to making these changes because it maintained that energy companies are not required to do so when power plant "modifications" merely increase the maximum hours of operation and not the hourly rate of air pollution emissions.[33] Duke Energy moved for summary judgment, contending that its actions did not trigger a PSD permit requirement because they did not increase hourly emission rates.[34] Persuaded by Duke Energy's evidence of EPA's interpretation of the regulations, as well as statutory language that addressed NSPS and PSD definitions of "modification," the United States District Court for the Middle District of North Carolina en-

29. *See Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1430 (2007) (exacting issue faced by Supreme Court from lower court decisions). NSPS regulations define "modification" as "any physical or operational change to an existing facility which results in an increase in the emission rate . . . emission rate[s] shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable." 40 C.F.R. § 60.14(a)–(b) (2000). PSD defines "modification" as "any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase . . . of a regulated NSR pollutant . . . and a significant net emissions increase of that pollutant from the major stationary source." 40 C.F.R. § 51.166(b)(2)(i) (2007).

30. *Envtl. Def.*, 127 S. Ct. at 1430 (detailing effects of replacing tube assemblies in Duke Energy coal-firing plants).

31. *Id.* at 1430 (describing initial charge by government).

32. *See id.* at 1430 (explaining Duke Energy refutation to EPA position).

33. *See id.* at 1430-31 (explaining Duke energy's refusal to apply for NSR permits). "[N]one of the projects was a 'major modification' requiring a PSD permit because none increased hourly rates of emissions." *Id.*

34. *Id.* at 1430-431 (explaining summary judgment argument for Duke Energy).

tered summary judgment for Duke Energy.[35] Furthermore, the district court noted that the PSD statute cross-referenced the NSPS definition of "modification," which defines the term as encompassing the hourly rate of emissions.[36]

Following the summary judgment ruling, the plaintiffs appealed to the Court of Appeals for the Fourth Circuit.[37] The plaintiffs argued that Duke Energy violated the PSD regulations, not because of increased hourly emissions, but because the "modified" plants would increase total pollution emissions and therefore further destroy the environment.[38] In response, Duke Energy maintained that the increased utilization of its coal plants did not fall within the EPA definition of "modification" found in the NSPS.[39] The Court of Appeals for the Fourth Circuit affirmed the district court ruling in favor of Duke Energy on the grounds that the PSD provisions cross-referenced the exact "modification" language found in the NSPS provision and should therefore be interpreted identically.[40] The court of appeals relied on a letter from EPA Director Edward Reich expressing the agency's view that a PSD permit is not required for changes in coal power plant emissions that do not affect the hourly emissions rate.[41] The Supreme Court granted certiorari and vacated the Court of Appeals for the Fourth Circuit's ruling, determining that the EPA's definition of "modification" only needs to fall within reasonable limits set by the CAA.[42] The

35. *United States v. Duke Energy*, 411 F.3d 539, 545 (4th Cir. 2005) (describing district court's statutory and regulatory rationale for holding). In 2007, the C.F.R. provisions defined "major modification" as: "any physical change in . . . the method of operation of a major stationary source that would result in: a significant emissions increase of a regulated NSR pollutant; and a significant net emissions increase of that pollutant from a major stationary source." *See* 40 C.F.R. § 51.166(b)(2)(i) (2007). The definition of "physical change . . . in the method of operation" did not include increases in hourly emissions. *Id.* The district court concluded that, because an increase in hourly rate is not included in the definition of "physical change," Duke Energy did not trigger the PSD permit requirement by modifying their plant to operate more hours each day. *See Duke Energy*, 411 F.3d at 545.

36. *Envtl. Def.*, 127 S. Ct. at 1431 (interpreting definition of "modification" to only apply to hourly emission increases).

37. *See id.* at 1431 (detailing Environmental Defense's action following summary judgment ruling).

38. *Id.* (explaining Environmental Defense's reasoning for appeal to Fifth Circuit Court of Appeals).

39. *Id.* (describing Duke Energy refutations to Environmental Defense's contentions).

40. *See id.* (stating Fifth Circuit Court of Appeals rationale for holding).

41. *See Envtl. Def.*, 127 S. Ct. at 1436 (using Reich Letter to provide support for Duke Energy's argument that Congress intended hourly emissions to control whether "modification" occurred).

42. *Id.* at 1434 (explaining issue for Supreme Court).

Supreme Court, therefore, accepted the Environmental Defense's assertion that annual increases in emissions trigger the need for energy companies to apply for PSD permits.[43]

III. BACKGROUND

A. The Clean Air Act and its Progeny

Congress, recognizing that carbon dioxide emissions have increased dramatically as a result of urbanization and a subsequent greater demand for energy, enacted the CAA Extension of 1970 to: (1) protect public health and well-being; (2) facilitate research on clean energy and pollution-prevention technologies; and (3) coordinate federal, state, and local efforts towards reducing pollution.[44] Congress amended the CAA, charging the federal government with administering the CAA through a new regulatory structure.[45] Among the 1970 amendments, the NSPS required all new plants creating pollution to install the most technologically current emissions control equipment and techniques available.[46]

The NSPS require all existing major power plants to install first-rate technologies if the plants were scheduled to be "modified" and also require all new fossil fuel-based power plants to install the most current emissions-reducing technology.[47] Plants qualify as having been "modified" if they exhibit "any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted."[48] The EPA further clarified this definition, noting that an hourly increase in the rate of emissions qualifies as an emissions increase.[49]

The 1977 CAA Amendments included the PSD regulations to maintain low pollution levels in areas with pristine air quality by applying more stringent air quality standards than the 1970 CAA

43. *See id.* (agreeing with EPA's assertions concerning true definition of "modification" in PSD regulations).

44. 42 U.S.C. § 7401(a)-(c) (1970) (listing purposes and goals of CAA).

45. *See* API, Air, http://www.api.org/ehs/air/ (last updated February 14, 2007) (listing key elements of 1970 CAA amendments).

46. *See* Edmondson, *supra* note 12, at 177 (explaining origins of NSPS).

47. *See* 42 U.S.C. § 7411(a)(4) (1990) (explaining differences in technology requirement for new and existing power plants).

48. *Id.* (defining term "modification" in regulating major sources of pollution).

49. *Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1428 (2007) (citing 40 C.F.R. § 60.14(b) (1976)) (refining NSPS definition of "modification" as kg/hr of emissions discharge).

amendments.[50] The PSD regulations require new and modified sources of pollution to obtain a NSR permit, which outlines emissions limitations for each individual polluting facility.[51] The PSD regulations, which cross-reference the NSPS definition of "modification," require existing sources of pollution to apply for a permit which certifies that their intended "modification" adheres to NSPS and PSD standards.[52]

On their faces, the NSPS and PSD regulations are alike and similarly define many important terms.[53] Under both the NSPS and PSD regulations, a "net emissions increase" is defined as "[a]ny increase in actual emissions from a particular physical change or change in the method of operation," viewed in light of other simultaneous "increases and decreases in actual emissions at the source."[54] PSD regulations define "actual emissions" as being "equal to the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source pollution."[55] Lastly, "significant" is defined as "a rate of emissions that would equal or exceed" an EPA-mandated threshold.[56]

The EPA acknowledged that the NSPS and PSD statutory definition of "modification" only includes increases in hourly emissions, but the agency sought to expand the definition to also include increases in total annual emissions.[57] In *Puerto Rican Cement Co. v. EPA* (*Puerto Rican Cement*),[58] the First Circuit Court of Appeals agreed with the EPA's contentions that, if there is the potential for a power plant to increase production intensity, any upgrades to a source of pollution constitute a "modification" regardless of the level of emissions per hour.[59] The court disregarded evidence that the capital improvements to the plant that almost certainly would not increase the hourly emissions rate or the days of operation per

50. *See* 42 U.S.C. § 7470 (1977) (noting impetus behind PSD requirements).

51. 42 U.S.C. § 7475(a) (1977) (discussing details of PSD program).

52. 40 C.F.R. pt. § 51.166(a)(7)(iii) (2007) (providing PSD definition of "modification").

53. *See generally* 40 C.F.R. § 51.166(b)(3) (2007) (listing various definitions of statutory language).

54. *See id.* (stating definition of "net emissions increase").

55. 40 C.F.R. § 51.155(b)(21)(ii) (2003) (defining "actual emissions").

56. 40 C.F.R. § 51.166(b)(23)(i) (2003) (defining "significant").

57. *See generally* Requirements for Preparation, Adoption and Submittal of Implementation Plans, 45 Fed. Reg. 52,676, 52,735 (Aug. 7, 1980) (to be codified at 40 C.F.R. pt. 51, 52, and 124) (defining major "modification").

58. 889 F.2d 292 (1st Cir. 1989).

59. *Id.* at 297 (agreeing with EPA over application of "modification").

week and concluded that the cement kiln at issue in the case could potentially increase total emissions.[60] The Court justified the "actual/potential" method of determining whether a plant upgrade would increase emissions by positing that, even though a plant may not be operating at maximum capacity, a "modification" that would further increase the plant's maximum capacity might potentially increase emissions.[61] Duke Energy challenged this holding.[62]

B. The Reich Letter

In 1981, Edward E. Reich, the EPA's Director of Stationary Source Enforcement, issued a public letter answering many questions posed by scholars and lawyers concerning the interplay between the NSPS and PSD regulations.[63] As Director of Stationary Source Enforcement, Reich was responsible for issuing every NSPS and PSD applicability determination.[64] Reich asserted that, under the NSPS, pollution emissions are measured by kilograms per hour rather than by tons per year.[65] Reich also noted that the NSPS differ from PSD regulations "only to the extent that the actual emissions rate of a source is determined at the time of the proposed change rather than averaging emissions from the previous two years."[66]

C. Case Law that Supports Duke Energy's Position

In *Rowan v. United States* (*Rowan*),[67] the Supreme Court held that a treasury regulation did not define the word "wages" in a manner consistent with legislative history and practical use.[68] Like *Environmental Defense*, *Rowan* involved interrelated statutes and

60. *Id.* at 298 (finding PSD regulations properly applied to new plant).

61. *Id.* at 297 (justifying EPA interpretation of PSD regulations).

62. *See Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1435 (2007) (explaining Duke Energy's challenge to actual-to-potential method of determining modification).

63. Letter from Edward Reich, Director of Stationary Source Enforcement, EPA, to Patrick M. Raher and Stephen A. Goldberg, Hogan & Hartson (1981), http://www.epa.gov/region07/programs/artd/air/nsr/nsrmemos/petrostr.pdf [hereinafter Reich] (identifying similarities in measuring NSPS and PSD emissions).

64. *See generally id.* (describing Reich's position and responsibilities).

65. *Id.* (explaining NSPS measurements).

66. *Id.* (emphasizing use of similar regulations for NSPS and PSD because of functional similarities).

67. 452 U.S. 247 (1981).

68. *Id.* at 263 (comparing various definitions of wages to determine consistency).

regulations.[69] In *Rowan*, Congress passed various federal tax regulations to coordinate the Federal Insurance Contributions Act (FICA) with the Federal Unemployment Tax Act (FUTA).[70] In *Environmental Defense*, the PSD provisions were intended to create concrete programs in an effort to enforce the goals of the NSPS.[71] *Rowan* supports the Court of Appeals for the Fourth Circuit's conclusion in *Environmental Defense* that, when different statutes provide identical definitions of a word, the agency in charge of enforcing the laws cannot interpret the words differently.[72]

In *Wisconsin Electric Power Co. v. Reilly* (*Wisconsin Electric*),[73] the Seventh Circuit held that "the EPA's reliance on an assumed continuous operation as a basis for finding an emissions increase is not properly supported. . . [and concluded that] the EPA's determination that there has been a major 'modification' for PSD purposes must be set aside."[74] The court concluded that the EPA, although waging a noble battle against the increasing threat of rising air pollution levels, could not be given deference when it redefines terms in environmental statutes.[75] Wisconsin Electric proved the flaws in the "actual-to-potential" model utilized by the First Circuit in *Puerto Rican Cement*, and the Seventh Circuit consequently determined that the EPA should measure future *actual* emissions instead of future *potential* emissions when determining whether a "modification" has occurred.[76]

In response to the decision in *Wisconsin Electric*, the EPA issued a rule replacing the actual-to-potential measurement with an "actual to future actual" methodology to determine whether modifying a source of pollution fell under PSD jurisdiction.[77] Ultimately, *Wisconsin Electric* supported Duke Energy's argument that the EPA can-

69. *See id.* (finding similarities in interplay of definition of words used in multiple statutes).

70. *Id.* at 257 (defining "wages" differently in two regulations in order to satisfy requirements of unique regulations).

71. See *Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1429 (2007) (emphasizing need for consistency and simplicity when defining words in similar government acts).

72. *United States v. Duke Energy*, 411 F.3d 539 (4th Cir. 2005) (finding parallels between *Rowan Cos. v. United States*, 452 U.S. 247 (1981), and present case).

73. 893 F.2d 901 (7th Cir. 1990).

74. *See id.* at 918 (refusing to allow EPA to reinterpret definition of "modification").

75. *Id.* at 919 (concluding that EPA's contentions were not justified based on plain meaning and congressional intent).

76. *See id.* at 916 (rejecting actual-to-potential model for defining "modification" in context of NSPS and PSD regulations).

77. *See* Edmondson, *supra* note 12, at 183-84 (describing rule change).

not change the standard of measuring emissions without adequate justification in the definitions.[78]

In *Chevron U.S.A. Inc. v. Natural Resources Defense Council* (*Chevron*),[79] the Supreme Court outlined a two-part test for reviewing the construction and intended meaning of a statute.[80] The initial question is whether congressional intent justifies the government agency's statutory interpretation.[81] In cases where intent is clear, the courts and parties must defer to congressional intent.[82] The second prong of the *Chevron* analysis supports Duke Energy's position because, if Congressional intent is ambiguous, the court must determine whether an agency's interpretation is reasonable in light of the statute's overarching purposes and formulation.[83]

Despite EPA contentions that NSPS and PSD were intended to achieve different goals, the Court of Appeals for the Fourth Circuit in *United States v. Duke Energy Corp.* (*Duke Energy*)[84] held that the identical wording of the definition of "modification" in the NSPS and the PSD amendments indicated clear Congressional intent.[85] The district court judge, acknowledging that the NSPS differs from the PSD regulations because the NSPS promotes using emissions-reducing technology while PSD regulates local air standards, emphasized that a uniform standard for measuring an increase in emissions was consistent with both programs' objectives.[86]

D. Case Law Supporting Environmental Defense

In *Atlantic Cleaners and Dyers v. United States* (*Atlantic Cleaners*),[87] a case concerning varied meanings of a word within a statute, the court held that "trade" could be defined differently throughout the Sherman Antitrust Act because "trade" was broadly construed.[88] The Supreme Court explained that "[i]t is not unusual for the same

78. *See id.* (providing support for identical definition of "modification" in NSPS and PSD regulations).

79. 467 U.S. 837 (1984).

80. *Id.* at 842 (explaining rationale for test to determine applicable definition of statutory provisions).

81. *Id.* (raising issues of significance behind congressional intent).

82. *Id.* (noting importance of congressional intent precedent).

83. *Id.* at 843-45 (explaining interpretive steps in cases of ambiguous congressional intent).

84. 411 F.3d 539 (4th Cir. 2005).

85. *See id.* at 548 (providing arguments to satisfy *Chevron* test).

86. *See* Gremillion, *supra* note 10, at 337 (maintaining that identical language and congressional intent promote uniform application of definition of "modification").

87. 286 U.S. 427 (1932).

88. *Id.* at 435-36 (upholding various definitions of word used in statute).

word to be used with different meanings in the same act, and there is no rule of statutory construction which precludes the courts from giving to the word the meaning which the legislature intended it should have in each instance."[89] *Atlantic Cleaners* gives weight to Environmental Defense's contention that "modification" should be broadly construed to reflect the purposes and goals of the CAA legislation.[90]

Similarly, the Court in *Northern Plains Resource Council v. EPA* (*Northern Plains*)[91] found that the EPA's inconsistent use of the word "commenced" in NSPS and PSD regulations was proper because the programs were different in nature.[92] In *Northern Plains* the EPA attempted to define the word "commenced" differently in two sections of the CAA, adding the phrase "for purposes of this part."[93] The facts of *Northern Plains*, however, limit the applicability of its holding in *Environmental Defense*; unlike the definition of "modification," Congress did not explicitly relate the definition of "commenced" in NSPS back to the definition of "commenced" in PSD.[94]

In *Robinson v. Shell Oil Co.* (*Robinson*),[95] a dispute arose over whether the term "employees" in the Civil Rights Act of 1964 included former employees.[96] The Supreme Court held the term was ambiguous and should be construed broadly within the purpose of the Act.[97] The majority found that, because the word "employees" was construed as "current employees" in some instances and "current and past employees" in other provisions of the Civil Rights Act, the term "employee" must be analyzed in each specific section to determine its plain meaning.[98] In the present case, Environmental Defense's argument that "modification" must be interpreted differently by NSPS and PSD is bolstered by the Court's acceptance of

89. *Id.* at 434 (providing evidence for broad construction of similar words in legal provisions).

90. *Id.* (articulating arguments for broad statutory construction).

91. 645 F.2d 1349 (9th Cir. 1981).

92. *Id.* at 1356 (justifying holding by noting that NSPS and PSD cannot be "commenced" in identical manner).

93. *Id.* at 1355 (distinguishing definition of "commenced" used in various sections of CAA).

94. *See id.* at 1352-353 (failing to provide statutory evidence that Congress intended identical definitions of "commenced").

95. 519 U.S. 337 (1997).

96. *Id.* at 346 (dismissing former employee's discrimination suit).

97. *Id.* (including context and purpose of statute in determining reasonable definition of "employees").

98. *Id.* at 343 (holding term "employees" in text of Civil Rights Act has numerous potential meanings).

various definitions of the term "employees" as found in the text of Title VII of the Civil Rights Act.[99]

Finally, in *United States v. Cleveland Indians Baseball Co.* (*Cleveland Indians*),[100] the Supreme Court held that the term "wages paid," written in two different contexts, did not necessarily have the same definition unless the government agency that promulgated the regulations offered a reasonable explanation for the contested language.[101] Although "the regulations [in *Cleveland Indians*]. . . do not specifically address backpay, the [government agency] has consistently interpreted them to require taxation of back wages according to the year the wages are actually paid, regardless of when those wages were earned or should have been paid."[102] *Cleveland Indians* highlights the importance of agency interpretation and context when determining the meaning of statutory provisions.[103]

IV. NARRATIVE ANALYSIS

In *Environmental Defense*, the Supreme Court reversed the Court of Appeals for the Fourth Circuit's judgment, holding that the Court of Appeals decision to reduce the effectiveness of the PSD regulations by aligning the PSD definition of "modification" with the NSPS definition was a death knell for the PSD regulations.[104] Justice Souter, writing for the majority, concluded the definition of "modification" should be based on broad statutory construction and that the legislative, statutory, and interpretive history of the definition of "modification" indicates differing interpretations of the term in the NSPS and PSD regulations.[105] Accordingly, the Court remanded Duke Energy's claim, concluding that the EPA disregarded twenty years of accepted practice when the government agency construed the definitions differently.[106]

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99. *See Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1432 (2007) (reconciling relationship between statutory provision and interpretations in *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997), with *Environmental Defense*).

100. 532 U.S. 200 (2001).

101. *See Envtl. Def.*, 127 S. Ct. at 1433-434 (2007) (highlighting reasonability test to justify government agency interpretation of statutory provisions).

102. *Cleveland Indians*, 532 U.S. at 219-20 (deferring to government agency's interpretation of contested provisions).

103. *See id.* at 219 (analyzing congressional intent when two statutory interpretations conflict).

104. *Envtl. Def.*, 127 S. Ct. at 1432 (explaining reasoning for case holding).

105. *See id.* at 1432, 1434 (describing overall conclusions of case).

106. *See id.* at 1436-437 (remanding and deferring Duke Energy's claims of inconsistent practice for fact-finding).

A. Broad Principles of Statutory Construction

The Supreme Court acknowledged that, although there is a presumption that a word located in different parts of the same statute will usually have the same meaning, most words can carry different meanings when placed in various contexts.[107] Justice Souter stated that, like the definition of "employee" in *Robinson*, the meaning of "modification" varies according to the context of the statute.[108] The Supreme Court also cited *Cleveland Indians* to reinforce the importance of context in interpreting legislative intent, holding that the use of the phrase "wages paid" in two different contexts was necessary but not sufficient to justify identical interpretations.[109]

The majority in *Environmental Defense* found that, despite the presence of relation back language in the PSD program's technical amendments to the NSPS, the EPA still retained the ability to interpret the statutes in a reasonable manner.[110] The Supreme Court's rationale centered on the absence of an express incorporation of the NSPS definition in the PSD regulations, rather than focusing on the cross-reference to the NSPS definition of "modification" included in the 1977 PSD amendments.[111] Additionally, the Court used the holding in *Atlantic Cleaners* to justify the Environmental Defense argument that an identical provision in different statutes can be interpreted differently.[112]

B. Differing Interpretations of "Modification" Through Legislative, Statutory, and Interpretive History

The Supreme Court rejected the Court of Appeals for the Fourth Circuit's ruling that "modification" should be defined identically in the NSPS and PSD regulations, primarily because the PSD regulations do not specify pollution rate increases.[113] PSD regulations "merely require a physical or operational change 'that would

107. *See id.* at 1432 (citing *Atl. Cleaners and Dyers v. United States*, 286 U.S. 427, 433 (1932)) (applying case in which identical words are construed differently within one statute).

108. *Envtl. Def.*, 127 S. Ct. at 1432-433 (comparing definition of "employees" in *Robinson* to definition of "modification" in *Environmental Defense*).

109. *See id.* at 1433 (2007) (highlighting importance of context when determining meaning of statutory language).

110. *Id.* at 1433-434 (arguing that government agency must be given discretion to interpret statutes absent clear congressional intent).

111. *See id.* (reaffirming EPA discretion in statutory interpretation of NSPS).

112. *See id.* at 1432 (providing instances of different practical meanings of similar words in statutes).

113. *See Envtl. Def.*, 126 S. Ct. at 1434 (finding Fifth Circuit Court of Appeals language extension unnecessary).

result in a significant net emissions increase of any' regulated pollutant."[114] Justice Souter opined that the district court had erred in concluding that "increases in hourly emissions" could be imputed into PSD regulations because the definition of "physical change or change in the method of operation" omitted language concerning increases in hours of operation.[115] The definition of "major modification," according to Justice Souter, includes both a physical change and a net emissions increase, but "a mere increase in the hours of operation, standing alone, is not 'a physical change or change in the method of operation.'"[116] The Supreme Court's opinion in *Duke Energy* also rejected the Court of Appeals for the Fourth Circuit's interpretation, which used *Rowan* as precedent to demonstrate that Congress intended the word "modification" in the PSD regulations to have the same definition as in the NSPS.[117]

The Supreme Court emphasized the difference between changing the plant's hours in order to run at maximum capacity, which does not involve a physical change to the power plant, and a physical change that increases the output beyond the previous maximum capacity.[118] In *Puerto Rican Cement* and *Wisconsin Electric*, the Court upheld the EPA's exclusion for increased power plant emissions at the existing maximum capacity, and only required PSD permits for a "modification" in cases where a physical change in a plant allowed for a higher maximum capacity.[119]

Justice Souter disregarded the interpretations of the NSPS and PSD definitions in the Reich letter, noting that the letter provided weak support for Duke Energy's position.[120] Justice Souter characterized the Reich letter as "an isolated opinion of an agency official [that] does not authorize a court to read a regulation inconsistently with its language."[121]

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114. *See id.* (citing 40 C.F.R. § 51.166(b)(2)(i) (2008)) (noting provision's express language omits discussion of hourly bases).

115. *Id.* at 1435 (finding fault with district court's justification for imputing hourly rate language on PSD).

116. *Id.* (citing 40 C.F.R. § 51.166(b)(2)(i) (2008)) (finding district court ignored two-part test of "major modification").

117. *See id.* at 1431 (rejecting Fourth Circuit's reliance on *Rowan* to justify similar definitions of "modification").

118. *See Envtl. Def.*, 127 S. Ct. at 1435 n.7 (proving that physical change is not needed to increase hours of operation in many cases).

119. *See id.* at 1435 (reiterating necessary but not sufficient aspect to PSD permits when plants increase emissions).

120. *Id.* at 1436 (giving minimal deference to EPA director's definition of "modification").

121. *Id.* (downplaying significance of one federal official's opinion).

In his concurring opinion, Justice Thomas disagreed with the Court's reasoning that the PSD cross-reference to the NSPS provisions allowed the EPA to interpret the definition of "modification" in different ways.[122] Justice Thomas asserted that Congress implemented the NSPS definition of "modification" and therefore "demonstrated that it did not intend for PSD's definition of 'modification' to hinge on contextual factors unique to the PSD statutory scheme."[123] The concurrence concluded that the majority failed to rebut the presumption established in *Atlantic Cleaners* that the same word used throughout a statute has the same meaning unless otherwise indicated.[124]

Ultimately, however, the Court found that the definition of "modification" should be construed broadly based on the differences in congressional intent for NSPS and PSD and that the EPA retains the ability to interpret the statutes in a reasonable manner.[125] The Court, therefore, explicitly rejected the evidence pointing to identical interpretations of "modification" in the NSPS and PSD regulations.[126]

V. CRITICAL ANALYSIS

The majority opinion in *Environmental Defense* persuasively supports relying on congressional intent and permitting a broad statutory analysis; however, its decision controversially discounts cross-references of the definition of "modification" available within the text of the CAA and advisory opinions provided by EPA directors.[127] In holding for Environmental Defense, the Supreme Court failed to give sufficient weight to the NSPS and PSD regulations' legislative history, provide consistent interpretation of statutory analysis, or consider the EPA's interpretation of the regulation at issue.[128]

122. *See id.* at 1437 (differing from majority opinion regarding meaning of "cross-reference implications").

123. *Envtl. Def.*, 127 S. Ct. at 1437 (arguing that meaning of NSPS definition of "modification" to PSD regulations is valid despite differing goals of NSPS and PSD).

124. *Id.* (finding similar contexts surrounding "modification" in NSPS and PSD do not invoke different meanings).

125. *Id.* at 1432 (rejecting Fourth Circuit's rigid statutory interpretation).

126. *Id.* (explaining final conclusions of case and providing basis for vacating opinion).

127. *See id.* at 1437 (Thomas, J., concurring) (finding explicit intent through meaning of "cross-references").

128. *See United States v. Duke Energy*, 411 F.3d 539, 548, 550 (4th Cir. 2005) (noting Congress intended identical statutory definition of "modification" in NSPS and PSD regulations, and irrebutable presumption of identical meaning). The Court in *Rowan* noted "[i]t would be extraordinary for a Congress pursuing this

A. Legislative Intent of the NSPS and PSD Regulations

The majority in *Environmental Defense* held that the EPA may use a reasonability test to determine the meaning of "modification" because "nothing in the. . . legislative history of the technical amendments that added the cross-reference to NSPS suggests that Congress had details of regulatory implementation in mind" for PSD.[129] The holding in *Atlantic Cleaners* suggests that identical words in different parts of a statute can only overcome the presumption of identical meaning when the words are used in a way that could reasonably have different meanings based on different intents.[130]

Pursuant to *Chevron*, an agency can reasonably interpret a statutory provision if Congress has been silent on the issue.[131] Unlike the statute in *Northern Plains*, which signaled different definitions of "commenced" by using the words "for this part only," the statute in the present case is not only devoid of language distinguishing the definition of "modification" in the NSPS and PSD regulations, but it actually provides an explicit reference to the NSPS definition of "modification."[132] Congress, cognizant of the controversy over the interpretation of "modification," decided against altering its definition in the 1990 CAA amendments.[133]

The legislature intended to define "modification" identically in the NSPS and PSD regulations because Congress did not alter or clarify the definition in the 1990 CAA amendments.[134] This definition provides additional evidence that the explicit reference to the definition of "modification" in the NSPS was correct.[135]

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interest to intend, without ever saying so, for identical definitions to be interpreted differently." *Rowan Cos. v. United States*, 452 U.S. 247, 257 (1981).

129. *Envtl. Def.*, 127 S. Ct. at 1433 (holding that cross-reference does not mandate identical meaning of "modification" in NSPS and PSD regulations).

130. *See Atl. Cleaners and Dyers v. United States*, 286 U.S. 427, 433 (1932) (determining instances in which presumption of identical definitions may be overcome).

131. *See Chevron U.S.A. Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 845-46 (1984) (explaining limited agency power to interpret congressionally promulgated statutes).

132. *See N. Plains Res. Council v. Envtl. Prot. Agency*, 645 F.2d 1349, 1356 (9th Cir. 1981) (providing support for finding different interpretations of "commenced"); *see also Envtl. Def.*, 127 S. Ct. at 1437 (Thomas, J., concurring) (finding explicit intent through meaning of "cross-references").

133. *See* Clean Air Act, Pub. L. No. 101-549, § 182, 104 Stat. 3385, 3417-18 (codified as amended at 42 U.S.C. § 7511(a) (2006)) (omitting definition changes to "modification" in NSPS or PSD regulations).

134. *Id.* (gathering legislative intent within 1990 CAA Amendment from EPA actions).

135. *See id.* (setting forth emissions standards issued in 1990 CAA Amendments).

B. Interpreting the Definition of "Modification"

The *Environmental Defense* majority concluded that the applicable emissions rate in the PSD regulations was the annual change in emissions and defined the terms "significant" and "net emissions increase" to indicate annual changes.[136] This interpretation ignores both the statutory language surrounding the term "modification" in the NSPS and PSD regulations and the clarification present in the Reich letter.[137] The EPA clearly defined the term "modification" in the NSPS, using hourly emissions increases to trigger a modification.[138] The EPA referred back to the NSPS definition when defining the scope of "modification" in the PSD regulations as under section 7411(a).[139]

The Supreme Court distinguished the *Robinson* decision from the present case because the statutory language in *Robinson* did not include explicit cross-references to the definition of "employee" in a different part of the Civil Rights Act.[140] Accordingly, inquiry into the definition of "modification" should have ceased because "the statutory language is unambiguous and 'the statutory scheme is coherent and consistent.'"[141]

Finally, the Reich letter provides additional justification for measuring power plant modifications on an hourly basis.[142] Although the NSPS and PSD regulations have different goals, the only difference between the two regulations (with regard to calculating emissions) is that the NSPS uses a power plant's actual emissions rate and the PSD regulations use a plant's two-year average emissions rate.[143] An hourly emissions rate measurement can adequately monitor increases in both actual emissions and average

136. *Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1434, 1436 (2007) (reiterating Supreme Court's conclusion in *Environmental Defense*).

137. *See id.* (arguing that "net emissions increase" excludes possibility of hourly measurements and discounting weight of Reich letters in applying hourly measurements standard).

138. *See United States v. Duke Energy*, 411 F.3d 539, 546-47 (4th Cir. 2005) (providing rationale for using hourly rate trigger for modification in PSD).

139. *Id.* (describing district court's statutory and regulatory rationale for upholding hourly rate to trigger modification in PSD).

140. *See Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997) (finding no temporal qualifier to signal plain and unambiguous statutory meaning).

141. *Id.* (quoting *United States v. Ron Pair Enter. Inc.*, 489 U.S. 235, 240 (1989)) (noting that inquiry into statutory interpretation ends if language is clear).

142. *See* Reich *supra* note 63, at 1-3 (providing answers to various questions concerning NSPS and PSD interplay).

143. *See id.* (highlighting parallels between NSPS and PSD regulatory procedure).

emissions over time.[144] Edward Reich verified using hourly emissions rates for NSPS, noting that the emissions rate is measured on a kilograms per hour basis.[145]

VI. IMPACT

The Supreme Court's decision in *Environmental Defense* will prolong the use of the ineffective NSPS and PSD programs and inhibit the creation of more effective models for reducing air pollutant emissions.[146] The EPA's PSD regulations fail to induce many "grandfathered" power plants, built during or before the 1970s, to upgrade with advanced pollution-reduction technology.[147] On the contrary, the PSD permit program provides an incentive for energy companies to avoid PSD regulation by simply refusing to upgrade existing power plants.[148] The 2002 CAA amendments, which decreased air emissions standards, further exacerbated the problem of industry non-compliance.[149] Consequently, many energy companies refuse to comply with PSD because "the program's complex nature renders compliance difficult."[150]

In 2005, despite the EPA's implementation of various CAA regulations to induce plant upgrades, approximately three-quarters of all power plants were over thirty years old, and most operated without pollution-reduction technology.[151] Additionally, the high costs

144. *See id.* (concluding actual and averaged emissions can be measured on hourly basis).

145. *See id.* (reaffirming increase in kg/hr of emissions as basis for triggering modification in NSPS).

146. *See* Edmondson, *supra* note 12, at 193 (explaining impracticability of current PSD regulations).

147. *See id.* at 194 (highlighting inefficiencies and challenges of PSD).

148. *See* U.S. Entvl. Prot. Agency, Compliance and Enforcement National Priority: Clean Air Act, New Source Review/Prevention of Significant Deterioration (Nov. 2004), http://www.epa.gov/compliance/resources/publications/data/planning/priorities/fy2005prioritycaansrpsd.pdf (explaining reasons for non-compliance with NRS/PSD).

149. Deepa Varadarajan, *Billboards and Big Utilities: Borrowing Land Use Concepts to Regulate "Nonconforming Sources" Under the Clean Air Act*, 112 YALE L.J. 2553, 2554 (2003) (identifying grandfathering as compounding problems of non-compliance).

150. *See id.* at 2555 (citing difficulties enforcing PSD for modified sources).

151. *See* John Paul, Supervisor of the Dayton Area Regional Air Pollution Control Agency, Testimony of the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials on the Need for Multi-Emission Legislation before the Subcommittee on Clean Air, Wetlands, and Climate Change of the Senate Committee on Environment and Public Works, Association of Local Air Pollutant Control Officials (January 26, 2005), http://www.4cleanair.org/SenateMulti-PTestimony-012405.pdf (highlighting energy industry incentives to not upgrade plants).

associated with installing pollution-reducing technology deterred the modification of aging plants.[152] The PSD regulations, therefore, impose high burdens on new and modified plants and permit the overutilization of older, less efficient plants.[153]

On its face, Environmental Defense's victory points towards positive effects for environmental interests.[154] For example, the *Environmental Defense* decision expands the definition of "modification" to include net annual emissions, thus bringing additional varieties of power plant "modifications" under the purview of PSD.[155] A decision for Duke Energy could have been a death knell for the PSD regulations, forcing legislators to spend excessive time and money creating a new plan for reducing air pollution emissions.[156]

On October 9, 2007, AEP narrowly avoided trial in federal court in Columbus, Ohio by agreeing to an exceptionally high $4.6 billion settlement.[157] The settlement required spending corporate funds to bring its inefficient power plants into compliance with pollution-control regulations and restore the surrounding environment.[158] Although AEP contends that it was planning on upgrading the power plant pollution-control systems before the threat of litigation, *Environmental Defense* may have contributed to AEP's decision to settle the lawsuit.[159] This settlement highlights a possible trend of industry deference to *Environmental Defense* and new opportunities for environmental groups to enforce PSD and NSPS provisions.[160]

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152. *See* U.S. Entvl. Prot. *Agency, supra* note 148 (showing high cost of upgrading coal plants).

153. *See* Gremillion, *supra* note 10, at 343 (concluding that NSR/PSD regulations could actually increase levels of air pollution emissions through inverse incentives).

154. *See generally id.* at 343-45 (granting EPA authority to enforce that Duke Energy upgrade pollution-control equipment).

155. *See Envtl. Def. v. Duke Energy*, 127 S. Ct. 1423, 1434 (2007) (arguing that "net emissions increase" excludes possibility of hourly measurements).

156. *See* Gremillion, *supra* note 10, at 344 (noting that decision for Duke Energy would have rendered PSD useless).

157. *See* Mufson, *supra* note 1, at D01 (explaining AEP settlement to reduce its emissions by two-thirds within ten years).

158. *See id.* (explaining AEP settlement terms which includes $15 million in civil penalties and $60 million to clean up damaged areas).

159. *See id.* (explaining AEP motivation for settling with potential plaintiffs).

160. *See generally id.* (identifying possibilities for future enforcement action against power companies).

The *Environmental Defense* holding could, however, work against environmental interests.[161] "Granting [the] EPA broad authority to construe the Clean Air Act and other environmental statutes may come back to haunt environmentalists" because the administration could use their broad discretion to "reasonably" interpret EPA statutes in favor of the energy industry.[162] The United States government and the EPA must use a different approach to more effectively limit the amount of air pollution that fossil fuel plants emit.[163]

Some scholars advocate repealing the PSD regulations and mandating that all "grandfathered" power plants immediately upgrade their pollution-control equipment to the current EPA standards.[164] This dangerous suggestion would cause energy companies to lose billions of dollars and would shut down a large portion of the power grid for an extended period of time.[165] Instead, Congress should enact a law creating a longitudinal phase-in mandate for all "grandfathered" power plants.[166] This would grant energy companies a five or ten year window to determine which power plants could be upgraded cost-effectively and which must be demolished and replaced all together.[167]

Other proponents of abolishing the PSD regulations advocate implementing a cap-and-trade program: a system setting a limit for total air emissions.[168] Such a program would distribute credits among the energy companies and induce the companies to buy and sell credits when emission demands rise and fall.[169] The mandatory

161. *See generally id.* at 341 (explaining environmental drawbacks to majority holding in *Environmental Defense*).

162. *See* Gremillion, *supra* note 10, at 341 (outlining potential for administrative abuse of EPA-related statutes).

163. *See* Edmondson, *supra* note 12, at 194 (advocating for new regulation programs to replace ineffective PSD regulations).

164. *See id.* (explaining need for mandate resulting from ineffective prior programs).

165. *See* Victor Flatt, Ctr. For Progressive Reform, Grandfathered Air Pollution Sources and New Source Review (2005), http://www.progressivereform.org/perspectives/grandfather.cfm (acknowledging failure of PSD and advocating definite timeframe for upgrading "grandfathered" plants).

166. *See id.* (seeking measures forcing power companies to upgrade grandfathered plants with emissions-reducing technology).

167. *See id.* (noting five-year phase-in policy aiming to reduce economic costs to energy industry).

168. *See* Envtl. Prot. Agency, Clean Air Market Programs, Cap and Trade: Essentials, http://www.epa.gov/airmarkets/cap-trade/docs/ctessentials.pdf (introducing possibility of implementing cap-and-trade program to reduce pollution emissions from coal-firing power plants).

169. *See id.* (explaining basics of cap-and-trade program).

cap on emissions would allow the EPA to directly control the amount of aggregate emissions from power sources on a regional or national scale.[170]

The Supreme Court decision in *Environmental Defense* cements the status of PSD provisions as a viable regulation by broadening the types of power plant "modifications" that fall within their scope.[171] What is unclear, however, is whether stronger enforcement of PSD regulations will bring the energy industry into compliance or if Congress needs to enact a more effective, long-term solution to rein in power plant emissions and improve ambient air quality for all Americans.[172]

John Marshall Valentine

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170. *See id.* (displaying advantages of cap-and-trade program over alternatives).

171. *See* Gremillion, *supra* note 10, at 333 (allowing EPA discretion in enforcing power plant upgrades with emissions-reducing technology).

172. *See id.* (analyzing short and long-term implications of Supreme Court decision in *Environmental Defense*).

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